

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P545292

Luminaire Tested: **FMR-12-2-LD4-1HI-40-UNV-82-94-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P545292
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-12-2-LD4-1HI-40-UNV-82-94-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

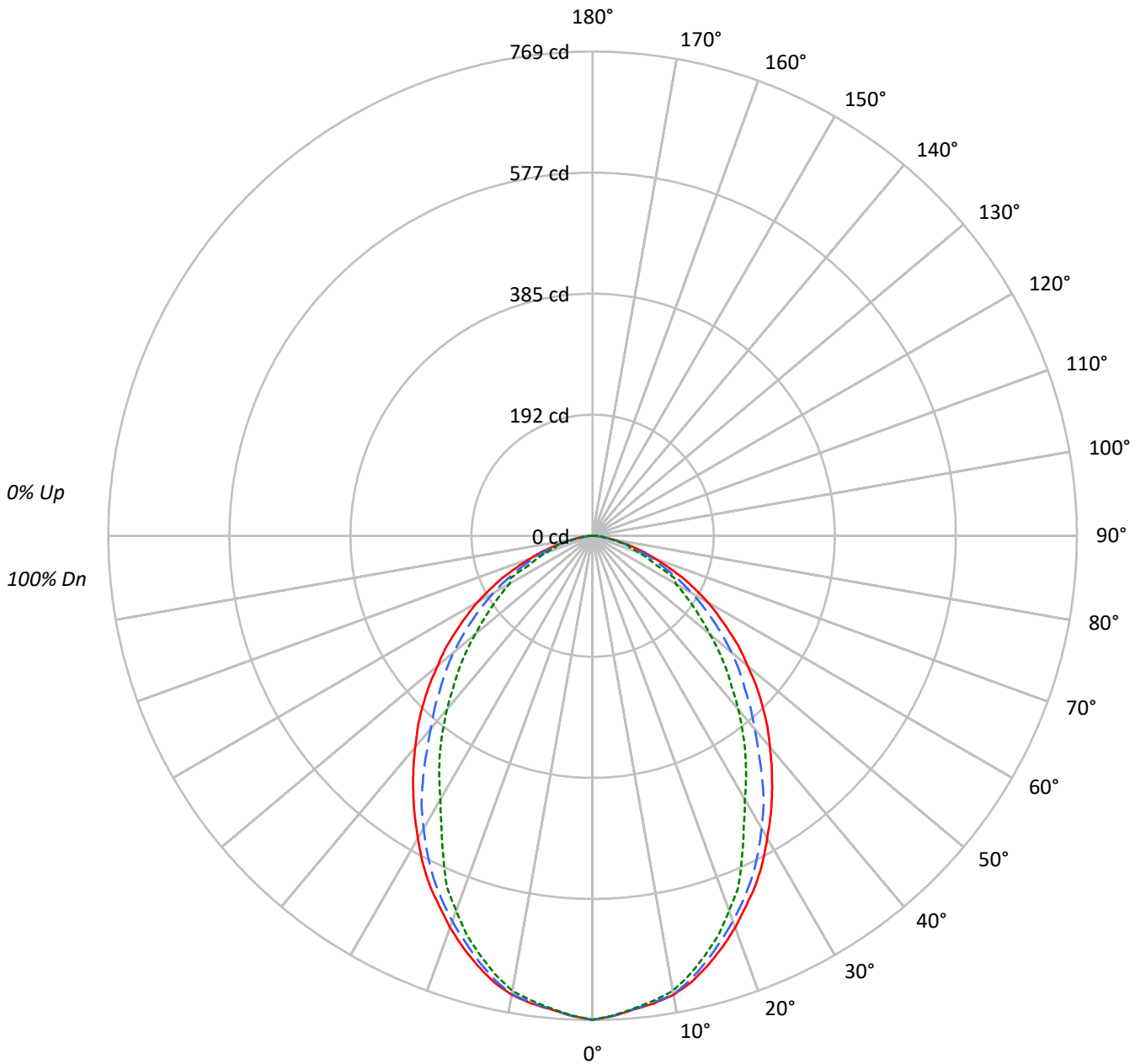
Lumens per Lamp: N/A
Luminaire Lumens: 1509.0 lumens
Efficiency: N/A
Efficacy: 69.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4137	4137	4137
5°	4081	4076	4071
10°	4045	4040	4011
15°	3936	3897	3842
20°	3792	3731	3629
25°	3636	3556	3335
30°	3446	3335	3004
35°	3263	3083	2779
40°	3078	2810	2529
45°	2901	2597	2286
50°	2686	2411	2039
55°	2485	2184	1826
60°	2277	1951	1636
65°	2003	1709	1448
70°	1651	1496	1231
75°	1312	1146	1202
80°	880	828	772
85°	550	661	766



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.6	4.7
10°-20°	196.4	13.0
20°-30°	271.9	18.0
30°-40°	289.9	19.2
40°-50°	264.5	17.5
50°-60°	207.2	13.7
60°-70°	135.0	8.9
70°-80°	59.8	4.0
80°-90°	12.9	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	539.8	35.8
0°-40°	829.7	55.0
0°-60°	1301.3	86.2
0°-90°	1509.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1509.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	769	769	769	769	769	
5°	755	754	754	754	754	72
15°	706	706	699	692	690	199
25°	612	609	599	578	562	281
35°	497	493	469	434	423	311
45°	381	373	341	313	300	294
55°	265	257	233	205	195	238
65°	157	148	134	137	114	155
75°	63	59	55	52	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	768.7	768.7	768.7	768.7	768.7
2.5°	763.3	763.3	763.3	762.4	762.4
5°	755.3	754.4	754.4	753.6	753.6
7.5°	749.1	748.2	747.3	746.4	744.7
10°	740.2	740.2	739.3	734.9	734.0
12.5°	726.0	725.1	721.6	715.3	713.6
15°	706.5	706.5	699.4	692.2	689.6
17.5°	685.1	684.2	675.4	668.2	664.7
20°	662.0	660.3	651.4	639.8	633.6
22.5°	636.3	636.3	625.6	610.5	604.3
25°	612.3	608.7	598.9	577.6	561.6
27.5°	584.7	579.4	568.7	538.5	519.8
30°	554.5	551.8	536.7	497.6	483.4
32.5°	526.1	521.6	505.6	464.8	453.2
35°	496.7	493.2	469.2	433.7	423.0
37.5°	467.4	463.0	432.8	404.3	391.0
40°	438.1	432.8	399.9	374.1	359.9
42.5°	410.5	403.4	371.4	343.9	327.9
45°	381.2	373.2	341.2	312.8	300.4
47.5°	351.9	344.8	315.5	286.1	271.9
50°	320.8	314.6	287.9	258.6	243.5
52.5°	295.0	285.3	259.5	230.2	217.7
55°	264.8	256.8	232.8	205.3	194.6
57.5°	237.3	229.3	207.1	181.3	172.4
60°	211.5	199.9	181.3	159.1	152.0
62.5°	183.1	174.2	158.2	139.5	148.4
65°	157.3	148.4	134.2	136.8	113.7
67.5°	128.9	124.4	112.0	99.5	96.0
70°	104.9	99.5	95.1	81.8	78.2
72.5°	83.5	78.2	72.0	64.9	62.2
75°	63.1	58.6	55.1	52.4	57.8
77.5°	43.5	41.8	39.1	36.4	35.5
80°	28.4	27.5	26.7	25.8	24.9
82.5°	16.9	16.9	16.9	16.9	16.9
85°	8.9	9.8	10.7	11.6	12.4
87.5°	5.3	5.3	6.2	7.1	8.0
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)